

**Notice of Allowability**

Application No.

09/593,056

Examiner

Abdelali Serrou

Applicant(s)

MATSUMOTO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 9/19/2005.
2. ☒ The allowed claim(s) is/are 13-23 and 25-37.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☒ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: 9-125425, 9-125426, 10-006599.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

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**OFFICE ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Claims 13-23, and 25-37 should be renumbered in order.

***Response to Amendment***

2. In response to the office action mailed on 06/09/2005, in the remarks filed on 09/19/2005, applicant amended the abstract of the application, and claims 13-15, 18, 20-23, 25, 27-29, and 37, and canceled claims 9- 12, and 24. These amendments have successfully overcome the rejection of claims 9-37. Since no new art warranting claim rejection has been found, the claims are allowed. The reasons are given next.

***Allowable Subject Matter***

3. Claims 13-23, and 25-37 are allowable over the prior art of record with the Examiner Amendment, above. The following is an examiner's statement of reasons for allowance:
4. As per claim 13, Han et al. (U.S 5, 812, 979) teach an audio decoding device (an MPEG-2 audio decoder, col. 1, lines 58-59) for decoding a plurality of channels of audio signals (col. 4, lines 11-12) by a sub-band synthesis operation using sub-band synthesis filter and sub-band

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signal data (col. 4, lines 13-22) with a first, second, and a third queue memory (col. 1, line 60 – col. 2, line 17).

However, Han et al. do not teach or suggest performing a sub-band synthesis fitter operation using the data stored in a first memory section so as to output  $M_a$  channels (where  $N_a > M_a > 1$ ) of decoded audio data, and requesting to switch positions of new sub-band synthesis filter data calculated by the sub-band synthesis filter operation and next sub-band synthesis filter data required; and a data transfer section for, based on the request from the operation section, switching, by  $M_a$  channels, the sub-band synthesis filter data and the sub-band signal data in the first memory section and the second memory section.

Gao et al. (U.S 5,832,445) do teach (a method and apparatus for decoding of digital audio data encoded in the accordance with layer 1 or 2 of the MPEG format, col. 4, lines 23-25) making use of a plurality of memories (elements 6 – 10, Fig. 1).

However, Gao et al. do not teach or suggest performing a sub-band synthesis fitter operation using the data stored in a first memory section so as to output  $M_a$  channels (where  $N_a > M_a > 1$ ) of decoded audio data, and requesting to switch positions of new sub-band synthesis filter data calculated by the sub-band synthesis filter operation and next sub-band synthesis filter data required; and a data transfer section for, based on the request from the operation section, switching, by  $M_a$  channels, the sub-band synthesis filter data and the sub-band signal data in the first memory section and the second memory section.

Ashby, III et al. (U.S 5,150,401) teach a communication system wherein the interface unit contains a voice coder and a voice decoder, which are of the sub-band type (col. 14, lines 28-46).

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However, Ashby, III et al. do not teach or suggest performing a sub-band synthesis filter operation using the data stored in a first memory section so as to output  $M_a$  channels (where  $N_a > M_a > 1$ ) of decoded audio data, and requesting to switch positions of new sub-band synthesis filter data calculated by the sub-band synthesis filter operation and next sub-band synthesis filter data required; and a data transfer section for, based on the request from the operation section, switching, by  $M_a$  channels, the sub-band synthesis filter data and the sub-band signal data in the first memory section and the second memory section

5. Claims 14-23, and 25-37, disclose the same features of claim 13, mentioned above. Therefore, they are allowable for the same reasons as set above in the allowance of claim 13.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdelali Serrou whose telephone number is 571-272-7638. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on 571-272-7628. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abdelali Serrou  
02/08/2006

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER